

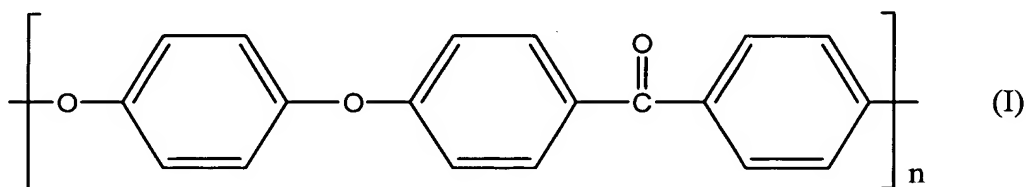
IN THE CLAIMS

Please amend the claims as follows:

Claims 1-30 (Canceled).

Claim 31 (New): A powder comprising essentially spherical particles of an aromatic polyether ketone plastic.

Claim 32 (New): The powder of Claim 31, wherein the aromatic polyether ketone plastic is a polyaryl ether ketone plastic comprising polymerized units of oxy-1,4-phenylene-oxy-1,4-phenylene-carbonyl-1,4-phenylene of formula (I)



Claim 33 (New): The powder of Claim 31, wherein the particles are spherical.

Claim 34 (New): The power according to Claim 1, further comprising one or more of a stiffening fiber or a reinforcing fiber, and a matrix material in the form of essentially spherical powder particles.

Claim 35 (New): The powder according to Claim 34, wherein the total amount of the stiffening fibers and reinforcing fibers is up to 25% by volume.

Claim 36 (New): The powder according to Claim 34, wherein the total amount of the stiffening fibers and reinforcing fibers is up to 15% by volume.

Claim 37 (New): The powder of Claim 34, wherein the total amount of the stiffening fibers and reinforcing fibers is up to 10% by volume.

Claim 38 (New): The powder according to Claim 34, wherein the fibers are embedded in the aromatic polyether ketone plastic.

Claim 39 (New): The powder according to Claim 34, wherein the fibers are essentially completely surrounded by the aromatic polyether ketone plastic.

Claim 40 (New): The powder according to Claim 34, wherein the reinforcing fibers and stiffening fibers are completely surrounded by the aromatic polyether ketone plastic.

Claim 41 (New): The powder according to Claim 38, wherein the reinforcing fibers and stiffening fibers are present in a volume proportion of greater than 15%.

Claim 42 (New): The powder according to Claim 38, wherein the stiffening fibers and reinforcing fibers are present in a volume proportion of greater than 25%.

Claim 43 (New): The powder according to Claim 34, wherein the matrix material comprises a thermoplastic material.

Claim 44 (New): The powder according to Claim 43, wherein the matrix material comprises a crosslinked polyamide.

Claim 45 (New): The powder according to Claim 44, wherein the crosslinked polyamide is at least one selected from the group consisting of PA11 and PA12.

Claim 46 (New): The powder according to Claim 43, wherein at least one of the stiffening fibers or reinforcing fibers comprises at least one of carbon or glass fibers.

Claim 47 (New): The powder according to Claim 31, wherein the spherical particles have an average grain sized d_{50} of from 20 to 150 μm .

Claim 48 (New): The powder according to Claim 31, wherein the spherical powder particles have an average grain size d_{50} of from 40 to 70 μm .

Claim 49 (New): The powder according to Claim 34, wherein the matrix material comprises a metallic material.

Claim 50 (New): The powder according to Claim 51, wherein the fibers are selected from the group consisting of ceramic fibers and boron fibers.

Claim 51 (New): The powder according to Claim 49, wherein the spherical powder particles have an average grain size d_{50} in the range of 10 to 100 μm .

Claim 52 (New): The powder according to Claim 49, wherein the spherical powder particles have an average grain size d_{50} of from 10 to 80 μm .

Claim 53 (New): The powder according to Claim 34, wherein the average length L_{50} of the fibers is no greater than the average grain size d_{50} of the spherical powder particles.

Claim 54 (New): A powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material.

Claim 55 (New): The powder according to Claim 54, wherein the total amount of the stiffening fibers and reinforcing fibers is up to 25% by volume.

Claim 56 (New): The powder according to Claim 54, wherein the total amount of the stiffening fibers and reinforcing fibers is up to 15% by volume.

Claim 57 (New): The powder of Claim 54, wherein the total amount of the stiffening fibers and reinforcing fibers is up to 10% by volume.

Claim 58 (New): The powder according to Claim 54, wherein the fibers are embedded in the aromatic polyether ketone plastic.

Claim 59 (New): The powder according to Claim 54, wherein the fibers are essentially completely surrounded by the aromatic polyether ketone plastic.

Claim 60 (New): The powder according to Claim 54, wherein the reinforcing fibers and stiffening fibers are completely surrounded by the aromatic polyether ketone plastic.

Claim 61 (New): The powder according to Claim 58, wherein the reinforcing fibers and stiffening fibers are present in a volume proportion of greater than 15%.

Claim 62 (New): The powder according to Claim 58, wherein the stiffening fibers and reinforcing fibers are present in a volume proportion of greater than 25%.

Claim 63 (New): The powder according to Claim 54, wherein the matrix material comprises a thermoplastic material.

Claim 64 (New): The powder according to Claim 63, wherein the thermoplastic material comprises a crosslinked polyamide.

Claim 65 (New): The powder according to Claim 64, wherein the crosslinked polyamide is at least one selected from the group consisting of PA11 and PA12.

Claim 66 (New): The powder according to Claim 63, wherein at least one of the stiffening fibers or reinforcing fibers comprises at least one of carbon or glass fibers.

Claim 67 (New): The powder according to Claim 54, wherein the spherical particles have an average grain sized d_{50} of from 20 to 150 μm .

Claim 68 (New): The powder according to Claim 54, wherein the spherical powder particles have an average grain size d_{50} of from 40 to 70 μm .

Claim 69 (New): The powder according to Claim 54, wherein the matrix material comprises a metallic material.

Claim 70 (New): The powder according to Claim 69, wherein the fibers are selected from the group consisting of ceramic fibers and boron fibers

Claim 71 (New): The powder according to Claim 69, wherein the spherical powder particles have an average grain size d_{50} in the range of 10 to 100 μm .

Claim 72 (New): The powder according to Claim 69, wherein the spherical powder particles have an average grain size d_{50} of from 10 to 80 μm .

Claim 73 (New): A method for the production of a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:

mixing a matrix micropowder into a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;

spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and

vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates.

Claim 74 (New): The method according to Claim 73, wherein the liquid phase is further mixed with at least one of a reinforcing fiber or a stiffening fiber having a length less than the particle size of the powder.

Claim 75 (New): The method according to Claim 73, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm .

Claim 76 (New): The method according to Claim 73, wherein the matrix micropowder has an average grain size d_{50} of 5 μm .

Claim 77 (New): The method of Claim 74, wherein the fibers have an average length L_{50} of 20 to 150 μm .

Claim 78 (New): The method according to Claim 74, wherein the fibers have an average length L_{50} of 40 to 70 μm .

Claim 79 (New): The method according to Claim 74, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm and the fibers have an average length L_{50} of 10 to 100 μm .

Claim 80 (New): The method according to Claim 74, wherein the matrix micropowder has an average grain size d_{50} of 5 μm and the fibers have an average length L_{50} of 10 to 80 μm .

Claim 81 (New): The method according to Claim 73, wherein the droplets have an average diameter d_{50} of 10 to 70 μm .

Claim 82 (New): The method according to Claim 73, wherein the vaporizing or evaporating is carried out while the droplets are moving through a heating segment.

Claim 83 (New): A method for the production of a powder comprising a first component in the form of essentially spherical powder particle and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, and the fibers are embedded in the powder particles, comprising:

mixing a matrix micropowder with a liquid phase to form a suspension wherein the particle size of the matrix micropowder is less than the particle size of the powder;

spraying the suspension through a nozzle to form droplets comprising the matrix micropowder; and

vaporizing or evaporating a liquid component from the droplets to form the powder in the form of essentially spherical agglomerates.

Claim 84 (New): The method according to Claim 83, wherein the liquid phase is further mixed with at least one of a reinforcing fiber or a stiffening fiber having a length less than the particle size of the powder.

Claim 85 (New): The method according to Claim 83, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm .

Claim 86 (New): The method according to Claim 83, wherein the matrix micropowder has an average grain size d_{50} of 5 μm .

Claim 87 (New): The method of Claim 83, wherein the fibers have an average length L_{50} of 20 to 150 μm .

Claim 88 (New): The method according to Claim 83, wherein the fibers have an average length L_{50} of 40 to 70 μm .

Claim 89 (New): The method according to Claim 84, wherein the matrix micropowder has an average grain size d_{50} between 3 and 10 μm and the fibers have an average length L_{50} of 10 to 100 μm .

Claim 90 (New): The method according to Claim 84, wherein the matrix micropowder has an average grain size d_{50} of 5 μm and the fibers have an average length L_{50} of 10 to 80 μm .

Claim 91 (New): The method according to Claim 83, wherein the droplets have an average diameter d_{50} of 10 to 70 μm .

Claim 92 (New): The method according to Claim 83, wherein the vaporizing or evaporating is carried out while the droplets are moving through a heating segment.

Claim 93 (New): A method for the production of a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:

cooling a coarse granulate comprising a plastic matrix material to form brittle, coarse granulates;

grinding the brittle, coarse granulates; and

separating the ground granulate into a fraction spectrum.

Claim 94 (New): The method according to Claim 93, wherein the coarse granulate is a fiber-reinforced plastic matrix material.

Claim 95 (New): The method according to Claim 93, wherein the grinding is carried out with a pinned disk mill.

Claim 96 (New): The method according to Claim 93, wherein the grinding is carried out with cooling.

Claim 97 (New): The method according to Claim 93, wherein the separating is carried out with an air separator.

Claim 98 (New): The method according to Claim 93, further comprising:
smoothing the ground granulate.

Claim 99 (New): The method according to Claim 98, wherein the smoothing is carried out by embedding or accumulating at least one of microparticles or nanoparticles.

Claim 100 (New): A method for producing a powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, comprising:

cooling a coarse granulate comprising a plastic matrix material to form brittle, coarse granulates;

grinding the brittle, coarse granulates; and

separating the ground granulate into a fraction spectrum.

Claim 101 (New): The method according to Claim 100, wherein the coarse granulate is a fiber-reinforced plastic matrix material.

Claim 102 (New): The method according to Claim 100, wherein the grinding is carried out with a pinned disk mill.

Claim 103 (New): The method according to Claim 100, wherein the grinding is carried out with cooling.

Claim 104 (New): The method according to Claim 100, wherein the separating is carried out with an air separator.

Claim 105 (New): The method according to Claim 100, further comprising:
smoothing the ground granulate.

Claim 106 (New): The method according to Claim 105, wherein the smoothing is carried out by embedding or accumulating at least one of microparticles or nanoparticles.

Claim 107 (New): A method for producing a powder comprising essentially spherical particles of an aromatic polyether ketone plastic, comprising:

melting a matrix material;

blowing the melted matrix material through a nozzle to form droplets; and

passing the droplets through a cooling segment.

Claim 108 (New): The method according to Claim 107, further comprising:

stirring at least one of stiffening fibers or reinforcing fibers into the melted matrix material before blowing the melted matrix material.

Claim 109 (New): The method according to Claim 107, wherein the droplets are formed in a hot gas jet.

Claim 110 (New): The method according to Claim 107, further comprising:

separating the cooled droplets into a fraction spectrum.

Claim 111 (New): A method for producing a powder comprising a first component in the form of essentially spherical powder particles and at least one of a stiffening fiber or a reinforcing fiber, wherein the first component comprises a matrix material, comprising:

melting a matrix material;

blowing the melted matrix material through a nozzle to form droplets; and

passing the droplets through a cooling segment.

Claim 112 (New): The method according to Claim 111, further comprising:

stirring at least of stiffening or reinforcing fibers into the melted matrix material before blowing the melted matrix material.

Claim 113 (New): The method according to Claim 111, wherein the droplets are formed in a hot gas jet.

Claim 114 (New): The method according to Claim 111, further comprising: separating the cooled droplets into a fraction spectrum.

Claim 115 (New): A method for producing a spatial structure, comprising: melting the powder according to Claim 31.

Claim 116 (New): The method according to Claim 115, wherein melting includes powder-based generative rapid prototyping, selective laser sintering or laser melting.

Claim 117 (New): A method for producing a spatial structure, comprising: melting the powder according to Claim 34.

Claim 118 (New): The method according to Claim 117, wherein melting includes powder-based generative rapid prototyping, selective laser sintering or laser melting.

Claim 119 (New): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 31.

Claim 120 (New): The molded body of Claim 119, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 121 (New): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 34.

Claim 122 (New): The molded body of Claim 121, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

Claim 123 (New): The molded body according to Claim 119, comprising one or more interior reinforcements.

Claim 124 (New): The molded body according to Claim 119, comprising a three-dimensional framework reinforcement.

Claim 125 (New): The molded body according to Claim 121, comprising one or more interior reinforcements.

Claim 126 (New): The molded body according to Claim 121, comprising a three-dimensional framework reinforcement.

Claim 127 (New): A molded body obtained by powder-based generative rapid prototyping of the powder according to Claim 54.

Claim 128 (New): The molded body of Claim 127, wherein the powder-based generative rapid prototyping is selective laser sintering or laser melting.

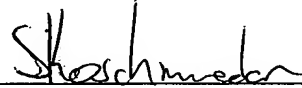
Claim 129 (New): The molded body according to Claim 128, comprising one or more interior reinforcements.

BASIS FOR THE AMENDMENT

Claims 31-129 are active in the present application. Claims 1-30 have been canceled. Claims 31-129 are new claims. Support for the new claims is found in the original claims. No new matter is believed to have been added by this amendment. An action on the merits and allowance of claims is respectfully solicited.

Respectfully submitted,

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